

REMARKS:

I. IDS:

An IDS is submitted herewith. The IDS includes U.S. Patent Application No. 10/770,881, referenced in the instant application on p. 11 of the specification. It is expressly noted that no admission is made regarding any alleged application or use of this reference as prior art against the instant patent application.

The IDS also includes references cited during the prosecution of U.S. Patent Application No. 10/770,881 and/or during the prosecution of corresponding foreign applications. Similarly, it is expressly noted that no admission is made regarding the alleged application or use of any of these references as prior art against either the instant application or U.S. Patent Application No. 10/770,881. Furthermore, no admission is made concerning the relevance or pertinence of these references to the claims of the instant application.

II. AMENDMENTS TO THE APPLICATION:

The specification and claims 1, 16, 31 and 43-57 are amended as indicated in the previous pages. These amendments are made for purposes of clarity and are not made in response to the rejections in the Office Action.

III. 35 U.S.C. §112 CLAIM REJECTIONS:

The Examiner rejected claims 1, 2, 3, 43 and 44 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. *See p. 3 of the Office Action.*

With respect to claim 1, the Examiner asserted that the phrase "requesting, by a gateway mobile terminal of a mobile network (MONET), from a link address manager of an access network (AN) information relating to a plurality of link addresses" was unclear. The Applicants respectfully disagree and note that this phrase made it clear that the gateway mobile terminal requests the information from the link address manager. There is no question as to which entity is sending the request, nor upon whom the request is made.

However, in order to further prosecution of this application, claim 1 has been amended to further clarify the claimed subject matter. It is submitted that these amendments are merely clarifying.

With respect to claims 1, 2, 3, 43 and 44, the Examiner asserted that the phrase "individual ones" is not clearly defined. Claim 1 recites in part: "allocating, based on the response, individual ones of assigned link addresses to individual ones of network nodes of the MONET." It is submitted that in claim 1 neither of the uses of "individual ones" is unclear. Each use is associated with a different group of items, i.e., assigned link addresses and network nodes of the MONET. Nowhere in the claims is the phrase "individual ones" used without an associated group of items. As such, there is no ambiguity as to which "individual ones" are being referenced. Thus, the meaning of these phrases is clearly defined.

It is further noted that claims 4-7, 16, 31, 33-35, 46, 49, 52, 53 and 58 also use a phrase containing "individual ones." Despite this, none of these claims are rejected by the Examiner under 35 U.S.C. §112, second paragraph. It is respectfully requested that the Examiner be consistent in rejecting claims based on usage of this phrase.

In rejecting claims 1, 2, 3, 43 and 44 under 35 U.S.C. §112, second paragraph, the Examiner does not explain the asserted lack of clarity. Rather, the Examiner simply argues that "the limitation 'individual ones' is not clearly defined." Without further explanation or discussion concerning any alleged unclear definition, it is difficult to determine what the Examiner means by this phrase. If the Examiner maintains this rejection, it is respectfully requested that additional

explanation be provided so that the Applicants may better address and/or respond to the Examiner's concerns.

IV. 35 U.S.C. §101 CLAIM REJECTIONS

The Examiner rejected claims 43-57 under 35 U.S.C. §101 as being directed to non-statutory subject matter. *See pp. 3-4 of the Office Action.*

The preamble of unamended claim 43 recited: "A program storage device readable by a mobile station, tangibly embodying a program of instruction executable by a data processor of the mobile station for performing operations, the operations comprising..." Thus, unamended claim 43 claimed a program storage device embodying a program of instructions. Contrary to the Examiner's assertion, said program did not comprise "nonstatutory functional descriptive material" since it was tangibly embodied on a program storage device. It is respectfully submitted that unamended claims 43-57 recited statutory subject matter.

However, in order to further prosecution of this application, and expressly without agreeing with the Examiner's position or the validity of the §101 claim rejections, claim 43 has been amended to recite: "A computer-readable medium storing a program of instructions executable by a data processor of a mobile station for performing operations, the operations comprising..." Claims 44-57 have been amended in a similar manner. It is submitted that these claim amendments are merely clarifying in nature.

V. 35 U.S.C. §102 CLAIM REJECTIONS:

The Examiner rejected claims 31, 32 and 40-42 under 35 U.S.C. §102(e) as being anticipated by Takahashi et al. (U.S. Patent No. 7,330,449). *See pp. 4-5 of the Office Action.* These rejections are respectfully disagreed with and are traversed below.

In the Abstract, Takahashi et al. state:

An object of the present invention is to decrease a care-of address update duration in switching of a link used for connection to an IP network by a mobile node (MN). MN acquires a list of access routers (ARs) existing on neighboring links to the link used for connection by the mobile node and creates a list of care-of addresses (CoAs) corresponding to the respective ARs entered in the list, each CoA being used as a destination of MN at a link on which an AR corresponding thereto exists. After the change of the connected link, MN acquires a data link layer address of AR existing on the link after the change and detects a default router on the basis of the address with reference to the access node list. Furthermore, MN detects a CoA with a network prefix corresponding with a subnet prefix of the default router, as a primary CoA and requests MAP to register a binding between the primary CoA and HoA.

At col. 5, line 51-col. 6, line 10, Takahashi et al. describe in greater detail a communication control method similar to that described in the Abstract.

Claim 31 of the instant application recites:

A mobile station comprising:

a transceiver configured to enable communication such that the mobile station functions as a gateway mobile terminal for being coupled between at least one Mobile Network Node (MNN) and an access point (AP) of an access network (AN); and

a data processor configured, in response to the mobile station connecting to the AP, to request information from a link layer address (LLA) manager of the AN, wherein the information relates to a plurality of LLAs, and wherein the data processor is further configured, in response to receiving a response to the request,

to allocate individual ones of the plurality of LLAs to individual ones of the MNNs.

Takahashi et al. do not disclose or suggest "a data processor configured, in response to the mobile station connecting to the AP, to request information from a link layer address (LLA) manager of the AN, wherein the information relates to a plurality of LLAs," as recited in claim 31.

Furthermore, Takahashi et al. do not disclose or suggest "wherein the data processor is further configured, in response to receiving a response to the request, to allocate individual ones of the plurality of LLAs to individual ones of the MNNs," as recited in claim 31.

It is noted that in rejecting claim 31 as being anticipated by Takahashi et al., the Examiner failed to identify any portion or portions of Takahashi et al. that are alleged to disclose the above-identified elements of claim 31. Should the Examiner maintain the rejection of claim 31 as being anticipated by Takahashi et al., it is requested that the Examiner explain the reasoning behind the rejection with more specificity and with reference to particular portion(s) of Takahashi et al. that the Examiner considers to be particularly relevant. At this time, it is not seen how the disclosure of Takahashi et al. relates to the subject matter recited in claim 31 of the instant application.

The features recited in claim 31 are not disclosed or suggested in the cited art. Takahashi et al. certainly cannot be seen as anticipating claim 31. Therefore, claim 31 is patentable and should be allowed.

Though dependent claims 32-42 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 31. However, to expedite prosecution at this time, no further comments will be made except as noted below.

The Examiner rejected claim 32 as being anticipated by Takahashi et al. Claim 32 recites: "where said data processor is operable to perform a neighbor discovery procedure with an access router (AR) of the AN to send at least one neighbor advertisement to declare an LLA allocated to

the at least one MNN." Since Takahashi et al. do not disclose or suggest allocating one or more LLAs to at least one MNN, Takahashi et al. cannot be seen as disclosing or suggesting the above-noted subject matter recited in claim 32. Claim 32 is patentable and should be allowed.

VI. 35 U.S.C. §103 CLAIM REJECTIONS:

(A) The Examiner rejected claims 1-4, 11-16, 43-46, 48 and 54-59 under 35 U.S.C. §103(a) as being unpatentable over Janneteau et al. (European Patent Application Publication No. 1367780 A1) in view of Narten et al. (RFC1970, "Neighbor Discovery for IP Version 6 (IPv6)," 1996). *See pp. 6-14 of the Office Action.*

(B) The Examiner rejected claims 5 and 49 under 35 U.S.C. §103(a) as being unpatentable over Janneteau et al. in view of Narten et al. and further in view of Lee et al. ("Route Optimization for Mobile Nodes in Mobile Network based on Prefix Delegation", IEEE, 2003). *See pp. 14-16 of the Office Action.*

(C) The Examiner rejected claims 6, 7, 52 and 53 under 35 U.S.C. §103(a) as being unpatentable over Janneteau et al. in view of Narten et al. and further in view of Perkins et al. ("Mobility Support in IPv6", to appear in Proceedings of the Second Annual international Conference on Mobile Computing and Networking (MobiCom '96), 1996). *See pp. 16-18 of the Office Action.*

(D) The Examiner rejected claims 8-10, 47, 50 and 51 under 35 U.S.C. §103(a) as being unpatentable over Janneteau et al. in view of Narten et al. and further in view of Chiou et al. (U.S. Patent No. 6,473,413). *See pp. 18-21 of the Office Action.*

(E) The Examiner rejected claim 33 under 35 U.S.C. §103(a) as being unpatentable over Takahashi et al. and further in view of Lee et al. *See pp. 22-23 of the Office Action.*

(F) The Examiner rejected claims 34 and 35 under 35 U.S.C. §103(a) as being unpatentable over Takahashi et al. and further in view of Perkins et al. *See pp. 23-24 of the Office Action.*

(G) The Examiner rejected claims 36-39 under 35 U.S.C. §103(a) as being unpatentable over Takahashi et al. and further in view of Chiou et al. *See pp. 24-28 of the Office Action.*

These rejections are respectfully disagreed with and are traversed below.

The Examiner rejected claim 1 as being unpatentable over Janneteau et al. in view of Narten et al. Janneteau et al. are concerned with route optimization in nested mobile networks. *See title and Abstract of Janneteau et al.*

Narten et al. are concerned with neighbor discovery for IPv6. More specifically, as stated in the Abstract:

IPv6 nodes on the same link use Neighbor Discovery to discover each other's presence, to determine each other's link-layer addresses, to find routers and to maintain reachability information about the paths to active neighbors.

The Examiner cited Janneteau et al. at col. 15, paragraph [0082], lines 1-58 and element 2400 in FIG. 24 as allegedly disclosing the allocating step of claim 1.

First, there is no element 2400 nor a FIG. 24 in Janneteau et al. It is unclear what the Examiner meant by referring to this element and figure.

Second, paragraph [0082] is in col. 14 and does not have 58 lines. It is unclear which portion of Janneteau et al. the Examiner is referring to.

Third, it is assumed that the Examiner rejected the claims under the wrong reference and instead meant to refer to another Janneteau et al. (European Patent Application Publication No. **1376973**)

A1), as in the previous Office Action.

In view of this assumption, the arguments presented in the previous Response to Office Action are repeated immediately below. It is respectfully requested that the Examiner consider these arguments.

The Examiner identified page 9, col. 15, para. [0082] of Janneteau et al. as allegedly disclosing features of claim 1. At page 9, col. 15, para. [0082], Janneteau et al. describe the Care-of Route Solicitation (CoR_Sol) message 2400 shown in FIG. 24, stating that "[i]t includes a single IP header 2425 that includes an IP source address 2410 for a host and an IP destination address 2420 indicating the all-routers IP multicast address."

In para. [0077] (page 8, col. 14), Janneteau et al. state:

Note that when a mobile router (MR) changes its location, it should send a CoR_Sol [Care-of Route Solicitation message], in order to receive a CoR_Advt message in return. The MR is then able to compute its new Care-of Route (CoR). This CoR will be made of the ordered list of addresses received in the CoR_Advt message [] to which MR's new Care-of address is appended.

Thus, the CoR_Sol message is a solicitation to receive CoR_Advt messages in order to compute a new CoR.

There is no disclosure or suggestion by Janneteau et al. of " requesting information relating to a plurality of link addresses from a link address manager of an access network (AN), where the requesting is performed by a gateway mobile terminal of a mobile network (MONET)," as recited in claim 1. There is no disclosure or suggestion of using a link address manager. Janneteau et al. obtain the addresses from a number of different devices along the Care-of Route for the soliciting device. Furthermore, the obtained addresses are used to compute a new Care-of Route for the soliciting device. This is in contrast to original claim 1 of the instant application, which recites

"allocating, based on the response, individual ones of assigned link addresses to individual ones of network nodes of the MONET." Janneteau et al. do not disclose or suggest any such allocation, and particularly not in conjunction with any request.

It is further noted that Narten et al. also do not disclose or suggest "allocating, based on the response, individual ones of assigned link addresses to individual ones of network nodes of the MONET," as recited in claim 1, nor does the Examiner assert otherwise.

The features recited in claim 1 are not disclosed or suggested in the cited art. Janneteau et al. in view of Narten et al. certainly does not render claim 1 obvious. Therefore, claim 1 is patentable and should be allowed.

Though dependent claims 2-15 and 58 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claim 1. However, to expedite prosecution at this time, no further comments will be made except as noted below.

Independent claims 16, 31 and 43 recite features similar to those of independent claim 1. For the reasons stated above with respect to claim 1, it is submitted that independent claims 16, 31 and 43 are not rendered obvious by Janneteau et al. in view of Narten et al. Claims 16, 31 and 43 are patentable and should be allowed.

Though dependent claims 32-42, 44-57 and 59 contain their own allowable subject matter, these claims should at least be allowable due to their dependence from allowable claims 16, 31 and 43. However, to expedite prosecution at this time, no further comments will be made except as noted below.

With regard to claim 2, it is submitted that a "neighbor advertisement" is not equivalent to a "Binding Update message," particularly since the functions of the two are considerably different. The Binding Update message updates the care-of routing for the mobile device, while the neighbor advertisement declares the allocated link addresses to neighboring nodes. The proposed

combination cannot be seen to render obvious the subject matter recited in dependent claim 2. It is noted that dependent claim 45 recites similar subject matter.

With regard to claim 4, the Examiner stated: "Janneteau et al. discloses having a care-of route solicitation message that is an ICMPv6 router solicitation message which can be sent by a MNN (mobile network node) .., this message solicits all the IP multicast address ("link layer addresses" column) belonging, to the router." It is respectfully submitted that Janneteau et al. contains no such disclosure and that the messaging described by Janneteau et al. does not function in the manner described by the Examiner. The Janneteau solicitation message solicits advertisements of the addresses of devices on the care-of route for the soliciting device. The soliciting device subsequently multicasts the obtained information (an ordered list of addresses comprising the care-of route) to the devices beneath it (i.e., the MNNs). At no time do Janneteau et al. disclose that the soliciting device **allocates** anything to the MNNs. If the undersigned agent's understanding of Janneteau et al. is in error, it is respectfully requested that the Examiner cite specific portions of Janneteau et al. that disclose the alleged functionality.

With regard to the rejection of claim 15, it is submitted that a "host having a list of default routers" is not the same as a link address manager (e.g., a LLA manager), such as the one recited in claim 15.

With regard to the rejection of claim 44 on page 12 of the Office Action, the Examiner failed to identify which method claim the rejection was to parallel. As such, it is submitted that this rejection is clearly improper.

With regard to the rejection of claim 5, it is noted that claim 5 recites: "where the request is made to obtain a group identification (Group_ID), where the method further comprises using an obtained Group_ID to formulate a set of link layer addresses (LLAs) that are allocated to individual ones of the network nodes." The Examiner cited Lee et al. as allegedly disclosing the claimed subject matter. Lee et al. disclose a mobile router that advertises a delegated prefix to its subnet by sending a router advertisement message with the Delegated Prefix option. The mobile

nodes receive the router advertisement message, make a care-of address from the prefix and perform binding updates to the home agent and correspondent node. *See p. 2036, Section 3, second and third paragraphs.* At no time do Lee et al. disclose or suggest a "request... to obtain a group identification," as recited in claim 5. Lee et al. also do not disclose or suggest "using an obtained Group_ID to formulate a set of link layer addresses (LLAs)," as recited in claim 5. Furthermore, Lee et al. do not disclose or suggest "using an obtained Group_ID to formulate a set of link layer addresses (LLAs) that are allocated to individual ones of the network nodes," as recited in claim 5. Claim 5 is patentable and should be allowed.

Claims 9 and 10 depend from claim 5. As such, claims 9 and 10 are further patentable over the cited prior art and should be allowed.

Claims 33 and 49 recite subject matter similar to that of claim 5. Thus, for the reasons stated above with respect to claim 5, claims 33 and 49 are similarly patentable and should be allowed.

Claims 37 and 38 depend from claim 33 while claims 50 and 51 depend from claim 49. As such, claims 37, 38, 50 and 51 are further patentable over the cited prior art and should be allowed.

With regard to the rejection of claim 6, it is noted that claim 6 recites: "where the request is made to obtain a set of link layer addresses (LLAs), where the method further comprises mapping individual ones of the LLAs to individual hardwired addresses of individual ones of the network nodes." The Examiner cited Perkins et al. at col. 4, lines 16-22 as allegedly disclosing the subject matter recited in claim 6. On page 16 of the Office Action, the Examiner asserted:

Perkins et al. discloses having a [*sic*] nodes discover each other's presence, as well as each other's link-layer (i.e. MAC) addresses by participating in the neighborhood discovery protocol (column 4 line 16-22). It is inferred that the link layer addresses corresponds [*sic*] to the MAC addresses of the nodes in the local network.

Perkins et al. merely assert that the link-layer addresses are the MAC addresses. Perkins et al. do not disclose or suggest any mapping, let alone "mapping individual ones of the LLAs to individual hardwired addresses of individual ones of the network nodes," as recited in claim 6. Furthermore, the Examiner failed to identify a portion or portions of Perkins et al. that are seen to allegedly disclose the claimed mapping. Claim 6 is patentable over the cited prior art and should be allowed.

Claims 7, 34, 35, 52 and 53 claim similar subject matter as claim 6. Thus, for the same reasons stated above with respect to claim 6, it is submitted that claims 7, 34, 35, 52 and 53 are also further patentable over the cited prior art and should be allowed.

It is noted that the arguments presented above with respect to claim 1, as well as some of those presented above with regard to various dependent claims, are very similar, and often identical, to the arguments presented in the previous Response to Office Action filed on January 3, 2008. Despite having added a reference to the rejection of claim 1 (and the rejections of other claims), the Examiner appears to have repeated the previous grounds of the rejections without consideration for the arguments presented. It is respectfully requested that the Examiner consider the arguments presented herein. Should the Examiner maintain the bases of the rejections (i.e., the reasoning used), it is further requested that the Examiner respond to Applicants' arguments so that the Applicants may better understand the Examiner's position and reasoning.

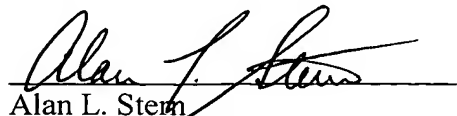
VII. CONCLUSION

The Examiner is respectfully requested to reconsider and remove the rejections of claims 1-16 and 31-59 and to allow all of the pending claims as now presented for examination. For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record. Should any unresolved issue remain, the Examiner is invited to call Applicants' agent at the telephone number indicated below.

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Art Unit: 2616

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Respectfully submitted:


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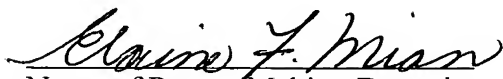
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